SERFF Tracking #: UTAC-129368050 State Tracking #:

Company Tracking #: LOYAL LSC/LSH

State: District of Columbia Filing Company: Loyal American Life Insurance Company

TOI/Sub-TOI: H07I Individual Health - Specified Disease - Limited Benefit/H07I.001 Critical Illness

Product Name: Loyal LSC/LSH

Project Name/Number: Loyal LSC/LSH/Loyal LSC/LSH

# Filing at a Glance

Company: Loyal American Life Insurance Company

Product Name: Loyal LSC/LSH
State: District of Columbia

TOI: H07I Individual Health - Specified Disease - Limited Benefit

Sub-TOI: H07I.001 Critical Illness

Filing Type: Rate

Date Submitted: 02/06/2014

SERFF Tr Num: UTAC-129368050 SERFF Status: Closed-APPROVED

State Tr Num:

State Status:

Co Tr Num: LOYAL LSC/LSH

Implementation On Approval

Date Requested:

Author(s): Denise Cox, Alycia Sumbera, Ashley Heath, Rena Warden, Victor Morales, Erica Bond

Reviewer(s): Darniece Shirley (primary), Alula Selassie, Donghan Xu

Disposition Date: 02/20/2014
Disposition Status: APPROVED
Implementation Date: 02/20/2014

State Filing Description:

SERFF Tracking #: UTAC-129368050 State Tracking #: Company Tracking #: LOYAL LSC/LSH

State: District of Columbia Filing Company: Loyal American Life Insurance Company

TOI/Sub-TOI: H07I Individual Health - Specified Disease - Limited Benefit/H07I.001 Critical Illness

**Product Name:** Loyal LSC/LSH

Project Name/Number: Loyal LSC/LSH/Loyal LSC/LSH

# **General Information**

Project Name: Loyal LSC/LSH Status of Filing in Domicile: Pending

Project Number: Loyal LSC/LSH

Requested Filing Mode: Review & Approval

Explanation for Combination/Other:

Date Approved in Domicile:

Domicile Status Comments:

Market Type: Individual

Individual Market Type:

Overall Rate Impact: Filing Status Changed: 02/20/2014

State Status Changed:

Deemer Date: Created By: Ashley Heath

Submitted By: Ashley Heath Corresponding Filing Tracking Number:

Filing Description:

Re: Loyal American Life Insurance Company

NAIC # 65722 FEIN # 63-0343428

**Actuarial Memorandum Rates** 

The rates described above are submitted for review and approval.

The policy forms and riders described above will provide Lump Sum Cancer and Lump Sum Heart and Stroke coverage and benefits and will be sold through licensed agents.

These rates are new and do not replace any rates previously approved by your department. We currently do not have any D.C policyholders as this is a new filing. The proposed Effective Date will be date of approval from the DOI.

To be used with previously approved endorsement L-4465 approved on 3-7-1995.

PLEASE NOTE THAT THIS POLICY INCLUDES A BINDING ARBITRATION PROVISION.

WE ARE UNCLEAR AS TO YOUR STATE'S REGULATTORY POSITION ON THIS. IF THIS IS AN UNACCEPTABLE PRACTICE, PLEASE ADVISE ON ACCEPTABLE ARBITRATION PROVISIONS.

The documents were prepared on a personal computer and will ultimately be printed from another date processing system that may cause some print style and/or page spacing changes. However, there will not be any changes to the actual text of the contract other than listed or bracketed variables.

If there are any questions or comments, please call me at (800) 633-6752 extension 4945, or email me at Ashley.Heath@Cigna.com.

Sincerely,
Ashley Heath
Compliance Senior Associate
Loyal American Life Insurance Company

# **Company and Contact**

SERFF Tracking #: UTAC-129368050 State Tracking #:

Company Tracking #: LOYAL LSC/LSH

State: District of Columbia Filing Company: Loyal American Life Insurance Company

TOI/Sub-TOI: H07I Individual Health - Specified Disease - Limited Benefit/H07I.001 Critical Illness

Product Name: Loyal LSC/LSH

Project Name/Number: Loyal LSC/LSH/Loyal LSC/LSH

**Filing Contact Information** 

Ashley Heath, Sr. Compliance Analyst Ashley.Heath@Cigna.com 11200 Lakeline Blvd. 512-531-1539 [Phone]

Suite 100

Austin, TX 78717

**Filing Company Information** 

Loyal American Life Insurance CoCode: 65722 State of Domicile: Ohio Company Group Code: 901 Company Type: Insurance

11200 Lakeline Blvd., Suite 100 Group Name: Company

P.O. Box 559004 FEIN Number: 63-0343428 State ID Number:

Austin, TX 78755-9004 (800) 633-6752 ext. [Phone]

# **Filing Fees**

Fee Required? No Retaliatory? No

Fee Explanation:

SERFF Tracking #: UTAC-129368050 State Tracking #: LOYAL LSC/LSH

State: District of Columbia Filing Company: Loyal American Life Insurance Company

TOI/Sub-TOI: H07I Individual Health - Specified Disease - Limited Benefit/H07I.001 Critical Illness

Product Name: Loyal LSC/LSH

Project Name/Number: Loyal LSC/LSH/Loyal LSC/LSH

# Rate/Rule Schedule

SERFF Tracking #: UTAC-129368050 State Tracking #: LOYAL LSC/LSH

State: District of Columbia Filing Company: Loyal American Life Insurance Company

H07I Individual Health - Specified Disease - Limited Benefit/H07I.001 Critical Illness

Product Name: Loyal LSC/LSH

TOI/Sub-TOI:

Project Name/Number: Loyal LSC/LSH/Loyal LSC/LSH

Item No.	Schedule Item Status	Document Name	Affected Form Numbers (Separated with commas)	Rate Action	Rate Action Information	Attachments
1		Lump Sum Cancer Policy and Recurrence	LY-LSC-BA	New		Actuarial Memorandum - Cancer Base.pdf, Attachment 1 - Cancer Premiums.pdf, Attachment 1 - Cancer Recurrence Premiums.pdf, Attachment 2 - Cancer Loss Ratios.pdf, Attachment 3 - Cancer Payroll Deduction Premiums.pdf, Attachment 4 - Cancer Recurrence Payroll Deduction Premiums.pdf,
2		Lump Sum Heart Policy and Restoration	LY-LSH-BA	New		Actuarial Memorandum - Heart Base.pdf, Attachment 1 - Heart and Stroke Premiums.pdf, Attachment 2 - Heart and Stroke Loss Ratios.pdf, Attachment 3 - Heart and Stroke Payroll Deduction Premiums.pdf, Attachment 4 - Heart and Stroke Restoration Payroll Deduction Premiums.pdf,

SERFF Tracking #: UTAC-129368050 State Tracking #: Company Tracking #: LOYAL LSC/LSH

Loyal American Life Insurance Company

State: District of Columbia Filing Company:

H07I Individual Health - Specified Disease - Limited Benefit/H07I.001 Critical Illness

Product Name: Loyal LSC/LSH

TOI/Sub-TOI:

Project Name/Number: Loyal LSC/LSH/Loyal LSC/LSH

•	•			
3	Hospital and Intensive Care Unit Indemnity Rider	LY-HICU-RD	New	Actuarial Memorandum - Hospital and Intensive Care Unit Indemnity Rider.pdf, Attachment 1 - Hospital and Intensive Care Unit Indemnity Premiums.pdf, Attachment 3 - Hospital and Intensive Care Unit Indemnity Loss Ratios.pdf, Attachment 2 - Hospital and Intensive Care Unit Indemnity Payroll Deduction Premiums_1-31- 14.pdf,
4	Hospital Indemnity Rider	LY-HI-RD	New	Actuarial Memorandum - Hospital Indemnity Rider.pdf, Attachment 1 - Hospital Indemnity Premiums.pdf, Attachment 3 - Hospital Indemnity Loss Ratios.pdf, Attachment 2 - Hospital Indemnity Payroll Deduction Premiums_1-31- 14.pdf,

SERFF Tracking #: UTAC-129368050 State Tracking #: Company Tracking #: LOYAL LSC/LSH

Filing Company: State: District of Columbia

H07I Individual Health - Specified Disease - Limited Benefit/H07I.001 Critical Illness Product Name: Loyal LSC/LSH

TOI/Sub-TOI:

Project Name/Number: Loyal LSC/LSH/Loyal LSC/LSH Loyal American Life Insurance Company

5	Intensive Care Unit Rider	LY-ICU-RD	New	Actuarial Memorandum - Intensive Care Unit Indemnity Rider.pdf, Attachment 1 - Intensive Care Unit Indemnity Premiums.pdf, Attachment 2 - Intensive Care Unit Indemnity Payroll Deduction Premiums.pdf, Attachment 3 - Intensive Care Unit Indemnity Loss Ratios.pdf, Attachment 2 - Intensive Care Unit Indemnity Payroll Deduction Premiums_1-31- 14.pdf,
6	Lump Sum Cancer Rider	LY-LSC-RD	New	Actuarial Memorandum - Cancer Rider.pdf, Attachment 1 - Cancer Premiums.pdf, Attachment 2 - Cancer Loss Ratios.pdf, Attachment 2 - Cancer Payroll Deduction Premiums.pdf,
7	Lump Sum Heart Rider	LY-LSH-RD	New	Actuarial Memorandum - Heart Rider.pdf, Attachment 1 - Heart and Stroke Premiums.pdf, Attachment 1 - Heart and Stroke Restoration Premiums.pdf, Attachment 2 - Heart and Stroke Loss Ratios.pdf, Attachment 2 - Heart and Stroke Payroll Deduction Premiums.pdf,

# Actuarial Memorandum Lump Sum Cancer Policy Form Series LY-LSC-BA

# 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Lump Sum Cancer Policy Form Series LY-LSC-BA. This memorandum supports the rates being filed. This is a new policy form. This memorandum is not intended to be used for any other purpose.

# 2. Benefit Description

The policy provides 100% of the selected benefit amount payable to the insured upon the first ever under the policy diagnosis of invasive cancer or carcinoma in situ.

If the insured is diagnosed within the first 30 days immediately following the effective date of the policy, the benefit amount will be reduced to be 10% of the selected benefit amount and coverage for that insured person will be terminated.

Benefit amounts will range from \$5,000 to \$100,000 in \$1,000 increments.

In addition to the base policy, an optional cancer recurrence benefit rider (form LY-CR-RD) is available. The rider benefit amount is the same as the base benefit amount. The rider pays a percentage of the benefit amount upon additional diagnoses of invasive cancer or carcinoma in situ as shown in the table below. The recurrence benefit applies when 100% of the original benefit has been paid and the insured person has not received advice or treatment for cancer for at least 24 consecutive months from the date of the last diagnosis under the policy and the rider. Up to an additional 100% of the benefit amount is payable under the recurrence benefit rider. If a percentage of the recurrence benefit amount is paid and the insured person then becomes eligible for a subsequent recurrence benefit, the amount payable for the subsequent recurrence benefit is the lesser of the percentage amount payable and 100% minus the percentage of the recurrence benefit amount received for all previous recurrence benefits.

Time Period Without Advice or Treatment	% of Cancer Recurrence Benefit Amount Payable	
Less than 24 months	0%	
24 months or more but less than 5 years	25%	
5 years or more but less than 10 years	75%	
More than 10 years	100%	

# 3. Renewability

This policy is guaranteed renewable for life.

# 4. Morbidity

The morbidity assumptions for cancer and carcinoma in situ were developed using the following sources:

- Cancer: 2000-2003 SEER Cancer Statistics Review
- Carcinoma in Situ: 2000-2003 SEER Cancer Statistics Review, Regional SEER data, and other sources

Basic attained age claim costs were derived from the above sources and have been adjusted to reflect the first ever diagnosis under the policy, take into account the effect of underwriting, and reflect Company experience. Claim costs were provided by Michelle Dyke, FSA, MAAA, Principal and Consulting Actuary of Milliman, Inc.

### 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

# 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse
1	25.0%
2	15.0%
3	12.5%
4	10.0%
5	9.0%
6	9.0%
7+	8.0%

# 7. Expenses

- a) Acquisition expenses are assumed to be \$25 per policy subject to 2% annual inflation
- b) Maintenance expenses are assumed to be \$20 per policy subject to 2% annual inflation, 4.5% of premium, and 3.0% of claims
- c) Premium taxes are assumed to be 2.0% of premium

#### 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates for the base and optional recurrence rider are included in Attachment 1 - Cancer Premiums and Attachment 1 - Cancer Recurrence Premiums.

# 9. Issue Age Range

The issue age range for the policyholder is 18 to 99.

#### 10. Area Factors

There are no area factors for these forms. The rates will be the same throughout the state.

# 11. Average Annual Premium

The average annual premium is \$531.02. Premiums are calculated by multiplying the number of units purchased by the annual per \$1,000 benefit premium rates included in Attachment 1 - Cancer Premiums and Attachment 1 - Cancer Recurrence Premiums.

#### 12. Premium Modalization

	Credit Card	Direct Bill	List Bill	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

# 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new forms.

#### 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new forms.

# 15. Trend Assumptions

No trend has been assumed in this filing.

# 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

#### 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 2 - Cancer Loss Ratios.

### 18. Actuarial Certification

I, Susan Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Hawthorne, ASA, MAAA

Associate, Society of Actuaries Member, American Academy of Actuaries

January 7, 2014

# Attachment 1 - Cancer Premiums Annual Premiums per \$1,000 Benefit Form Series LY-LSC-BA

Issue Age	Individual	Couple	One-Parent	Family
18-29	8.82	14.71	10.00	16.47
30-34	8.82	14.71	10.00	16.47
35-39	8.82	14.71	10.00	16.47
40-44	11.18	19.41	12.94	21.18
45-49	14.71	25.88	15.88	27.06
50-54	19.41	33.53	20.00	35.29
55-59	24.71	43.53	25.88	44.71
60-64	31.18	54.71	31.76	55.88
65-69	37.65	65.88	38.24	67.06
70-74	42.94	75.29	43.53	75.88
75-79	44.12	77.65	44.71	78.24
80-84	45.29	79.41	45.88	80.00
85-89	45.88	81.18	46.47	81.76
90-94	47.65	84.12	48.24	84.71
95-99	51.18	90.00	51.76	91.18

# Loyal American Life Insurance Company Attachment 1 - Cancer Recurrence Premiums Annual Premiums per \$1,000 Benefit Form Series LY-CR-RD: Cancer Recurrence Rider

Issue Age	Individual	Couple	One-Parent	Family
18-29	0.71	1.18	0.82	1.35
30-34	0.71	1.18	0.82	1.35
35-39	0.71	1.18	0.82	1.35
40-44	0.88	1.59	1.06	1.71
45-49	1.24	2.12	1.29	2.24
50-54	1.59	2.76	1.65	2.82
55-59	2.00	3.53	2.06	3.59
60-64	2.53	4.41	2.59	4.47
65-69	3.06	5.29	3.12	5.35
70-74	3.06	5.29	3.12	5.35
75-79	3.06	5.29	3.12	5.35
80-84	3.06	5.29	3.12	5.35
85-89	3.06	5.29	3.12	5.35
90-94	3.06	5.29	3.12	5.35
95-99	3.06	5.29	3.12	5.35

# Attachment 2 - Cancer Loss Ratios Anticipated Durational Loss Ratios Form Series LY-LSC-BA

Policy	Earned	Incurred	Durational
<u>Year</u>	<u>Premium</u>	<u>Claims</u>	Loss Ratio
1	1,000.00	347.94	35%
2	772.06	229.38	30%
3	650.37	389.14	60%
4	562.57	338.26	60%
5	497.53	303.18	61%
6	441.22	270.45	61%
7	393.78	247.89	63%
8	353.31	225.23	64%
9	315.60	203.31	64%
10	282.68	184.04	65%
11	252.91	166.46	66%
12	225.35	150.01	67%
13	201.15	135.34	67%
14	179.22	121.87	68%
15	159.12	109.44	69%
16	141.54	98.43	70%
17	125.74	88.40	70%
18	111.57	79.27	71%
19	98.75	70.89	72%
20	87.43	63.40	73%
21	77.30	56.65	73%
22	68.25	50.54	74%
23	60.17	44.99	75%
24	52.90	39.91	75%
25	46.54	35.41	76%
26	40.90	31.41	77%
27	35.88	27.78	77%
28	31.44	24.49	78%
29	27.42	21.45	78%
30	23.98	18.80	78%
31	20.95	16.47	79%
32	18.27	14.37	79%
33	15.92	12.47	78%
34	13.77	10.70	78%
35	11.98	9.19	77%
36	10.41	7.85	75%
37	9.03	6.66	74%
38	7.82	5.59	71%
39	6.71	4.60	69%
40	5.80	3.80	65%
Discounted at 3.24%	5,852.36	3,219.08	55.0%

# Loyal American Life Insurance Company <u>Attachment 3 - Cancer Payroll Deduction Premiums</u> Annual Premiums per \$1,000 Benefit Form Series LY-LSC-BA

	Individual	Couple	One-Parent	Family
Payroll Rate	12.94	22.94	14.71	24.12

# <u>Attachment 4 - Cancer Recurrence Payroll Deduction Premiums</u> Annual Premiums per \$1,000 Benefit

# Form Series LY-CR-RD: Cancer Recurrence Rider

	Individual	Couple	One-Parent	Family
Payroll Rate	1.18	2.35	1.18	2.35

# Actuarial Memorandum Lump Sum Heart and Stroke Policy Form Series LY-LSH-BA

# 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Lump Sum Heart and Stroke Policy Form Series LY-LSH-BA. This memorandum supports the rates being filed. This is a new policy form. This memorandum is not intended to be used for any other purpose.

# 2. Benefit Description

The policy provides a scheduled benefit payable to the insured upon the first ever diagnosis or procedure under the policy for any of the following qualifying events. The maximum total percentage of the benefit amount payable is 100% of the selected benefit amount.

Qualifying Event	Percentage of Benefit Amount Payable
Heart Attack	100%
Heart Transplant – or combination transplant including heart	100%
Stroke	100%
Coronary Bypass Surgery	25%
Aortic Surgery	25%
Heart Valve Replacement / Repair	25%
Angioplasty	10%
Stent	10%

If an insured person receives a percentage of the benefit amount for one qualifying event in the chart above and then becomes eligible for benefits for another qualifying event, the benefit amount payable for the subsequent qualifying event is the lesser of the percentage amount payable or 100% minus the percentage of the benefit amount received for all previous qualifying events.

Benefit amounts will range from \$5,000 to \$100,000 in \$1,000 increments.

In addition to the base policy, an optional heart and stroke restoration benefit rider (form LY-HR-RD) is available. The rider benefit amount is the same as the base benefit amount. The rider pays a percentage of the benefit amount upon an additional diagnosis or procedure of heart attack, heart transplant, or stroke as shown in the table below. The restoration benefit applies when 100% of the original benefit has been paid and the insured person has not received advice or treatment from a physician for these specific qualifying events for at least 24 months from the date of the last diagnosis or qualifying event under the policy and the rider. Up to an additional 100% of the benefit amount is payable under the restoration benefit rider. If a percentage of the restoration benefit amount is paid and the insured person then

becomes eligible for a subsequent restoration benefit, the amount payable for the subsequent restoration benefit is the lesser of the percentage amount payable and 100% minus the percentage of the restoration benefit amount received for all previous restoration benefits.

Time Period Without Advice or Treatment	% of Heart and Stroke Restoration Benefit Amount Payable
Less than 24 months	0%
24 months or more but less than 5 years	25%
5 years or more but less than 10 years	75%
More than 10 years	100%

# 3. Renewability

This policy is guaranteed renewable for life.

# 4. Morbidity

The morbidity assumptions for each of the heart conditions and procedures covered were developed using the following sources:

- Heart Attack: American Heart Association 2007 Heart and Stroke Statistical Update
- Major Organ Transplant: Milliman Research Reports on Organ and Tissue Transplant Costs and Discussion published in 2002, 2005, and 2006
- Stroke: American Heart Association 2007 Heart and Stroke Statistical Update
- Coronary Artery Bypass Surgery: American Heart Association 2007 Heart and Stroke Statistical Update
- Aortic Surgery: Adult Cardiac Surgery in New York State, 2002-2004
- Heart Valve Replacement / Repair: American Heart Association 2007 Heart and Stroke Statistical Update
- Angioplasty: American Heart Association 2007 Heart and Stroke Statistical Update
- Stent: American Heart Association 2010 Heart Disease and Stroke Statistical Update

Basic attained age claim costs were derived from the above sources and have been adjusted to reflect the first ever diagnosis or procedure under the policy, remove comorbidities, take into account the effect of underwriting, and reflect Company experience. Claim costs were provided by Michelle Dyke, FSA, MAAA, Principal and Consulting Actuary of Milliman, Inc.

# 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

# 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse
1	25.0%
2	15.0%
3	12.5%
4	10.0%
5	9.0%
6	9.0%
7+	8.0%

# 7. Expenses

- a) Acquisition expenses are assumed to be \$25 per policy subject to 2% annual inflation
- b) Maintenance expenses are assumed to be \$20 per policy subject to 2% annual inflation, 4.5% of premium, and 3.0% of claims
- c) Premium taxes are assumed to be 2.0% of premium

# 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 - Heart and Stroke Premiums and Attachment 1 - Heart and Stroke Restoration Premiums.

# 9. Issue Age Range

The issue age range for the policyholder is 18 to 99.

### 10. Area Factors

There are no area factors for these forms. The rates will be the same throughout the state.

# 11. Average Annual Premium

The average annual premium is \$540.17. Premiums are calculated by multiplying the number of units purchased by the annual per \$1,000 benefit premium rates included in Attachment 1 - Heart and Stroke Premiums and Attachment 1 - Heart and Stroke Restoration Premiums.

#### 12. Premium Modalization

	Credit Card	Direct Bill	List Bill	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

# 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new forms.

#### 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new forms.

# 15. Trend Assumptions

No trend has been assumed in this filing.

#### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

# 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 2 - Heart and Stroke Loss Ratios.

# 18. Actuarial Certification

I, Susan Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Hawthorne, ASA, MAAA Associate, Society of Actuaries

Member, American Academy of Actuaries

January 7, 2014

# Loyal American Life Insurance Company Attachment 1 - Heart and Stroke Premiums Annual Premiums per \$1,000 Benefit Form Series LY-LSH-BA

Issue Age	Individual	Couple	One-Parent	Family
18-29	8.24	13.53	8.82	14.12
30-34	8.24	13.53	8.82	14.12
35-39	8.24	13.53	8.82	14.12
40-44	11.18	18.82	11.76	19.41
45-49	14.71	25.29	15.29	25.88
50-54	18.82	32.94	19.41	33.53
55-59	24.12	42.35	24.71	42.94
60-64	31.18	54.71	31.76	55.29
65-69	39.41	69.41	40.00	70.00
70-74	50.00	88.24	50.59	88.82
75-79	61.18	108.24	61.76	108.82
80-84	71.76	126.47	72.35	127.06
85-89	81.18	142.94	81.76	143.53
90-94	89.41	157.65	90.00	158.24
95-99	96.47	170.00	97.06	170.59

# Loyal American Life Insurance Company <u>Attachment 2 - Heart and Stroke Loss Ratios</u> Anticipated Durational Loss Ratios Form Series LY-LSH-BA

Policy	Earned	Incurred	Durational
<u>Year</u>	<u>Premium</u>	<u>Claims</u>	Loss Ratio
1	1,000.00	304.09	30%
2	768.51	205.78	27%
3	644.57	402.62	62%
4	554.62	347.19	63%
5	488.85	309.79	63%
6	432.80	275.49	64%
7	385.03	252.05	65%
8	344.37	227.93	66%
9	307.04	204.96	67%
10	274.23	184.56	67%
11	244.66	166.05	68%
12	217.80	149.02	68%
13	193.87	133.66	69%
14	172.17	119.54	69%
15	152.78	106.83	70%
16	135.55	95.51	70%
17	120.10	85.19	71%
18	106.28	75.82	71%
19	93.77	67.21	72%
20	82.82	59.65	72%
21	73.04	52.95	72%
22	64.32	46.85	73%
23	56.57	41.35	73%
24	49.58	36.30	73%
25	43.52	31.95	73%
26	38.15	28.18	74%
27	33.40	24.75	74%
28	29.19	21.65	74%
29	25.39	18.78	74%
30	22.17	16.36	74%
31	19.32	14.29	74%
32	16.82	12.40	74%
33	14.62	10.68	73%
34	12.62	9.07	72%
35	10.97	7.72	70%
36	9.51	6.54	69%
37	8.23	5.46	66%
38	7.11	4.47	63%
39	6.10	3.56	58%
40	5.26	2.82	54%
Discounted at 3.24%	5,739.89	2 157 22	55.0%
5.2170	5,/39.89	3,157.23	55.0%

# Loyal American Life Insurance Company <u>Attachment 3 - Heart and Stroke Payroll Deduction Premiums</u> Annual Premiums per \$1,000 Benefit Form Series LY-LSH-BA

	Individual	Couple	One-Parent	Family
Payroll Rate	12.94	22.35	13.53	22.94

# <u>Attachment 4 - Heart and Stroke Restoration Payroll Deduction Premiums</u> Annual Premiums per \$1,000 Benefit

Form Series LY-HR-RD: Lump Sum Heart and Stroke Restoration Rider

	Individual	Couple	One-Parent	Family
Payroll Rate	1.76	2.35	1.76	2.35

#### Actuarial Memorandum

Hospital and Intensive Care Unit Indemnity Benefit Rider Form Series LY-HICU-RD

# 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Hospital and Intensive Care Unit Indemnity Benefit Rider Form Series LY-HICU-RD. This memorandum supports the rates being filed. This is a new rider form. This memorandum is not intended to be used for any other purpose.

# 2. Benefit Description

The rider provides a selected hospital indemnity benefit amount for each day that an insured person is confined to a Hospital as an inpatient. It will pay twice the selected hospital indemnity benefit amount for each day that an insured person is confined to the Intensive Care unit or Coronary Care unit as an inpatient. The confinement must be for at least 24 hours and benefits will not be payable for more than 30 days for any one period of confinement. The confinement must be due to injury, sickness, or complications from pregnancy. Daily hospital indemnity benefit amounts range from \$100 to \$1000 per day in \$100 increments. Benefits are reduced 50% for confinements which begin on or after an insured's 65th birthday.

# 3. Renewability

The renewability of the rider is based on the base policy to which it is attached.

# 4. Morbidity

The morbidity assumptions for the rider were developed using Milliman's 2010  $Health\ Cost\ Guidelines^{TM}$ .

# 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

# 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse
1	25.0%
2	15.0%
3	12.5%
4	10.0%
5-6	9.0%
7+	8.0%

# 7. Expenses

- a) Maintenance expenses are assumed to be 4.5% of premium and 3.0% of claims
- b) Premium taxes are assumed to be 2.0% of premium

#### 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 – Hospital and Intensive Care Unit Indemnity Premiums.

Premiums for payroll policies will vary by rate class and benefit amount and are included in Attachment 2 – Hospital and Intensive Care Unit Indemnity Payroll Deduction Premiums.

# 9. Issue Age Range

The issue ages are based on the base policy to which this rider is attached and may range from 18 to 99.

#### 10. Area Factors

There are no area factors for these forms. The rates will be the same throughout the state.

# 11. Average Annual Premium

The average annual premium is \$377.09. This is based on a daily benefit amount of \$300. Premiums are calculated by multiplying the number of units purchased by the annual per \$100 daily benefit premium rates included in Attachment 1 – Hospital and Intensive Care Unit Indemnity Premiums or Attachment 2 – Hospital and Intensive Care Unit Indemnity Payroll Deduction Premiums.

# 12. Premium Modalization

	Credit		Payroll	
	Card	Direct Bill	Deduction	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

#### 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new forms.

#### 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new forms.

# 15. Trend Assumptions

No trend has been assumed in this filing.

#### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

# 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 3 - Hospital and Intensive Care Unit Indemnity Loss Ratios.

#### 18. Actuarial Certification

I, Susan Buck Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Buck Hawthorne, ASA, MAAA Associate, Society of Actuaries

Member, American Academy of Actuaries

Sidan Buck Hawthorn

January 13, 2014

# Attachment 1 - Hospital and Intensive Care Unit Indemnity Premiums Annual Issue Age Premiums for \$100 per day Benefit Form Series LY-HICU-RD: Hospital and Intensive Care Unit Indemnity Rider

Issue Age	Individual	Couple	One-Parent	Family
18-29	33.53	67.06	70.59	112.35
30-34	39.41	78.82	87.06	135.88
35-39	47.65	95.29	99.41	157.65
40-44	57.06	114.12	107.65	177.06
45-49	68.24	136.47	115.29	194.71
50-54	81.18	162.35	124.71	213.53
55-59	95.29	190.59	133.53	234.71
60-64	106.47	212.94	141.18	252.35
65-69	110.59	221.18	141.76	255.88
70-74	131.18	262.35	161.76	292.94
75-79	149.41	298.82	179.41	328.24
80-84	159.41	318.82	188.82	347.65
85-89	164.12	328.24	193.53	357.65
90-94	168.82	337.65	198.24	366.47
95-99	172.94	345.88	202.35	375.29

# <u>Attachment 3 - Hospital and Intensive Care Unit Indemnity Loss Ratios</u> Anticipated Durational Loss Ratios

Form Series LY-HICU-RD: Hospital and Intensive Care Unit Indemnity Rider

Policy	Earned	Incurred	Durational
<u>Year</u>	<u>Premium</u>	<u>Claims</u>	Loss Ratio
1	1,000.00	399.19	40%
2	780.10	354.43	45%
3	663.72	386.09	58%
4	581.05	332.33	57%
5	519.25	302.17	58%
6	446.15	262.09	59%
7	402.58	238.59	59%
8	365.34	217.86	60%
9	315.46	191.73	61%
10	285.79	173.13	61%
11	258.74	157.67	61%
12	221.73	136.98	62%
13	200.30	123.87	62%
14	180.80	113.09	63%
15	153.44	97.11	63%
16	138.11	87.54	63%
17	124.19	79.07	64%
18	111.57	71.37	64%
19	100.13	64.76	65%
20	89.78	58.04	65%
21	80.42	52.26	65%
22	71.96	46.88	65%
23	64.32	42.03	65%
24	57.43	38.09	66%
25	51.22	33.75	66%
26	45.63	30.19	66%
27	40.61	26.89	66%
28	36.10	23.91	66%
29	32.06	21.52	67%
30	28.43	18.87	66%
31	25.19	16.72	66%
32	22.29	14.74	66%
33	19.70	12.95	66%
34	17.40	11.55	66%
35	15.34	9.96	65%
36	13.52	8.69	64%
37	11.89	7.50	63%
38	10.45	6.45	62%
39	9.16	5.88	64%
40 Discounted at	8.03	4.81	60%
3.24%	5,956.82	3,276.21	55.0%

# <u>Attachment 2 - Hospital and Intensive Care Unit Indemnity Payroll Deduction Premiums</u> Annual Premiums for \$100 per day

Form Series LY-HICU-RD: Hospital and Intensive Care Unit Indemnity Premiums

	Individual	Couple	One-Parent	Family
Payroll Rate	62.94	125.29	111.76	185.88

# Actuarial Memorandum Hospital Indemnity Benefit Rider Form Series LY-HI-RD

# 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Hospital Indemnity Benefit Rider Form Series LY-HI-RD. This memorandum supports the rates being filed. This is a new rider form. This memorandum is not intended to be used for any other purpose.

# 2. Benefit Description

The rider provides a selected hospital indemnity benefit amount for each day that an insured person is confined to a Hospital as an inpatient, including confinement to the Intensive Care Unit or Coronary Care unit. The confinement must be for at least 24 hours and benefits will not be payable for more than 30 days for any one period of confinement. The confinement must be due to injury, sickness, or complications from pregnancy. Daily hospital indemnity benefit amounts range from \$100 to \$1000 per day in \$100 increments. Benefits are reduced 50% for confinements which begin on or after an insured's 65th birthday.

### 3. Renewability

The renewability of the rider is based on the base policy to which it is attached.

# 4. Morbidity

The morbidity assumptions for the rider were developed using Milliman's 2010  $Health Cost Guidelines^{TM}$ .

#### 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

# 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse
1	25.0%
2	15.0%
3	12.5%
4	10.0%
5	9.0%
6	9.0%
7+	8.0%

# 7. Expenses

- a) Maintenance expenses are assumed to be 4.5% of premium and 3.0% of claims
- b) Premium taxes are assumed to be 2.0% of premium

# 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 - Hospital Indemnity Premiums.

Premiums for payroll deduction policies will vary by rate class and benefit amount and are included in Attachment 2 - Hospital Indemnity Payroll Deduction Premiums.

# 9. Issue Age Range

The issue ages are based on the base policy to which this rider is attached and may range from 18 to 99.

#### 10. Area Factors

There are no area factors for these forms. The rates will be the same throughout the state.

# 11. Average Annual Premium

The average annual premium is \$327.68. This is based on a daily benefit amount of \$300. Premiums are calculated by multiplying the number of units purchased by the annual per \$100 daily benefit premium rates included in Attachment 1 - Hospital Indemnity Premiums or Attachment 2 - Hospital Indemnity Payroll Deduction Premiums.

#### 12. Premium Modalization

	Credit		Payroll	
	Card	Direct Bill	Deduction	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

#### 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new forms.

#### 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new forms.

# 15. Trend Assumptions

No trend has been assumed in this filing.

# 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

# 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 3 - Hospital Indemnity Loss Ratios.

#### 18. Actuarial Certification

I, Susan Buck Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Buck Hawthorne, ASA, MAAA

Associate, Society of Actuaries

Member, American Academy of Actuaries

January 13, 2014

# Loyal American Life Insurance Company <u>Attachment 1 - Hospital Indemnity Premiums</u> Annual Issue Age Premiums for \$100 per day Benefit Form Series LY-HI-RD: Hospital Indemnity Rider

Issue Age	Individual	Couple	One-Parent	Family
18-29	28.82	57.65	61.18	96.47
30-34	34.12	68.24	75.29	117.06
35-39	41.18	82.35	85.88	136.47
40-44	48.82	97.65	93.53	152.94
45-49	58.82	117.65	100.00	168.82
50-54	70.59	141.18	108.24	185.88
55-59	82.94	165.88	116.47	204.71
60-64	93.53	187.06	124.12	221.18
65-69	97.65	195.29	124.71	225.29
70-74	115.88	231.76	142.94	259.41
75-79	132.94	265.88	158.82	291.18
80-84	141.76	283.53	167.06	308.82
85-89	146.47	292.94	171.76	317.65
90-94	150.59	301.18	175.29	325.88
95-99	154.12	308.24	179.41	332.94

# <u>Attachment 3 - Hospital Indemnity Loss Ratios</u> Anticipated Durational Loss Ratios

Form Series LY-HI-RD: Hospital Indemnity Rider

Policy	Earned	Incurred	Durational
<u>Year</u>	<u>Premium</u>	<u>Claims</u>	Loss Ratio
1	1,000.00	396.64	40%
2	779.95	352.33	45%
3	663.46	386.05	58%
4	580.70	332.78	57%
5	518.84	302.30	58%
6	445.74	262.20	59%
7	402.12	238.72	59%
8	364.84	217.96	60%
9	314.98	191.83	61%
10	285.28	173.19	61%
11	258.22	157.70	61%
12	221.23	137.01	62%
13	199.78	123.87	62%
14	180.28	113.08	63%
15	152.96	97.08	63%
16	137.63	87.50	64%
17	123.72	79.02	64%
18	111.11	71.31	64%
19	99.68	64.69	65%
20	89.35	57.96	65%
21	80.00	52.18	65%
22	71.56	46.79	65%
23	63.94	41.93	66%
24	57.06	37.99	67%
25	50.88	33.66	66%
26	45.31	30.10	66%
27	40.31	26.80	66%
28	35.82	23.83	67%
29	31.79	21.44	67%
30	28.19	18.79	67%
31	24.96	16.65	67%
32	22.08	14.66	66%
33	19.51	12.88	66%
34	17.22	11.48	67%
35	15.18	9.89	65%
36	13.37	8.63	65%
37	11.76	7.44	63%
38	10.33	6.40	62%
39	9.05	5.82	64%
40	7.93	4.76	60%
Discounted at 3.24%	T 040 0F	2 271 07	<b>55 00</b> 7
J.27/U	5,948.95	3,271.87	55.0%

## <u>Attachment 2 - Hospital Indemnity Payroll Deduction Premiums</u>

## **Annual Premiums for \$100 per day**

Form Series LY-HI-RD: Hospital Indemnity Rider

	Individual	Couple	One-Parent	Family
Payroll Rate	54.12	107.65	97.06	161.18

## Actuarial Memorandum Intensive Care Unit Indemnity Benefit Rider Form Series LY-ICU-RD

## 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Intensive Care Unit Benefit Rider Form Series LY-ICU-RD. This memorandum supports the rates being filed. This is a new rider form. This memorandum is not intended to be used for any other purpose.

## 2. Benefit Description

The rider provides a selected intensive care unit indemnity benefit amount for each day that an insured person is confined to the Intensive Care unit or Coronary Care unit as an inpatient. The confinement must be for at least 24 hours and benefits will not be payable for more than 30 days for any one period of confinement. The confinement must be due to injury, sickness, or complications from pregnancy. Daily intensive care unit indemnity benefit amounts range from \$100 to \$1000 per day in \$100 increments. Benefits are reduced 50% for confinements which begin on or after an insured's  $65^{\rm th}$  birthday.

## 3. Renewability

The renewability of the rider is based on the base policy to which it is attached.

## 4. Morbidity

The morbidity assumptions for the rider were developed using Milliman's 2010  $Health\ Cost\ Guidelines^{TM}$ .

#### 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

## 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse
1	25.0%
2	15.0%
3	12.5%
4	10.0%
5	9.0%
6	9.0%
7+	8.0%

## 7. Expenses

- a) Maintenance expenses are assumed to be 4.5% of premium and 3.0% of claims
- b) Premium taxes are assumed to be 2.0% of premium

#### 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 - Intensive Care Unit Indemnity Premiums.

Premiums for payroll deduction policies will vary by rate class and benefit amount and are included in Attachment 2 – Intensive Care Unit Indemnity Payroll Deduction Premiums.

## 9. Issue Age Range

The issue ages are based on the base policy to which this rider is attached and may range from 18 to 99.

#### 10. Area Factors

There are no area factors for these forms. The rates will be the same throughout the state.

## 11. Average Annual Premium

The average annual premium is \$74.11. This is based on a daily benefit amount of \$300. Premiums are calculated by multiplying the number of units purchased by the annual per \$100 daily benefit premium rates included in Attachment 1 - Intensive Care Unit Indemnity Premiums or Attachment 2 - Intensive Care Unit Indemnity Payroll Deduction Premiums.

#### 12. Premium Modalization

	Credit		Payroll	
	Card	Direct Bill	Deduction	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

#### 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new forms.

#### 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new forms.

## 15. Trend Assumptions

No trend has been assumed in this filing.

#### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

## 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 3 - Intensive Care Unit Indemnity Loss Ratios.

#### 18. Actuarial Certification

I, Susan Buck Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Buck Hawthorne, ASA, MAAA

Associate, Society of Actuaries

Member, American Academy of Actuaries

January 13, 2014

# Loyal American Life Insurance Company Attachment 1 - Intensive Care Unit Indemnity Premiums Annual Issue Age Premiums for \$100 per day Benefit Form Series LY-ICU-RD: Intensive Care Unit Rider

Issue Age	Individual	Couple	One-Parent	Family
18-29	7.65	15.29	15.29	24.12
30-34	8.82	17.65	18.24	28.82
35-39	10.00	20.00	20.59	32.94
40-44	11.76	23.53	22.35	36.47
45-49	14.12	28.24	23.53	39.41
50-54	15.88	31.76	24.71	42.35
55-59	18.24	36.47	25.88	45.29
60-64	19.41	38.82	26.47	47.06
65-69	19.41	38.82	25.88	45.88
70-74	22.35	44.71	28.82	51.18
75-79	25.29	50.59	31.18	55.88
80-84	26.47	52.94	32.35	58.82
85-89	27.65	55.29	32.94	60.00
90-94	28.24	56.47	34.12	61.76
95-99	28.82	57.65	34.71	62.94

## <u>Attachment 2 - Intensive Care Unit Indemnity Payroll Deduction Premiums</u>

## **Annual Premiums for \$100 per day**

Form Series LY-ICU-RD: Intensive Care Unit Indemnity Rider

	Individual	Couple	One-Parent	Family
Payroll Rate	15.29	30.00	24.71	42.35

# <u>Attachment 3 - Intensive Care Unit Indemnity Loss Ratios</u> Anticipated Durational Loss Ratios

Form Series LY-ICU-RD: Intensive Care Unit Rider

Policy	Earned	Incurred	Durational
<u>Year</u>	<u>Premium</u>	<u>Claims</u>	Loss Ratio
1	1,000.00	416.06	42%
2	781.12	368.36	47%
3	665.45	386.36	58%
4	583.33	329.31	56%
5	521.99	301.25	58%
6	448.89	261.33	58%
7	405.63	237.74	59%
8	368.65	220.48	60%
9	318.69	187.84	59%
10	289.18	172.72	60%
11	262.24	157.45	60%
12	225.08	136.82	61%
13	203.69	123.86	61%
14	184.20	113.21	61%
15	156.67	97.27	62%
16	141.30	87.81	62%
17	127.33	79.43	62%
18	114.64	71.82	63%
19	103.12	65.25	63%
20	92.67	58.59	63%
21	83.19	52.83	64%
22	74.61	47.48	64%
23	66.85	42.64	64%
24	59.83	38.69	65%
25	53.49	34.37	64%
26	47.77	30.79	64%
27	42.62	27.48	64%
28	37.98	24.49	64%
29	33.80	22.07	65%
30	30.05	19.40	65%
31	26.69	17.23	65%
32	23.68	15.22	64%
33	20.98	13.42	64%
34	18.56	11.99	65%
35	16.41	10.38	63%
36	14.49	9.09	63%
37	12.77	7.89	62%
38	11.24	6.83	61%
39	9.88	6.22	63%
40	8.68	5.15	59%
Discounted at 3.24%	6,000,06	2 204 00	EE 00/
J.2 T /U	6,009.06	3,304.99	55.0%

## <u>Attachment 2 - Intensive Care Unit Indemnity Payroll Deduction Premiums</u>

## Annual Premiums for \$100 per day

Form Series LY-ICU-RD: Intensive Care Unit Indemnity Rider

	Individual	Couple	One-Parent	Family
Payroll Rate	12.94	25.88	22.94	38.24

## Actuarial Memorandum Lump Sum Cancer Rider Form Series LY-LSC-RD

## 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Lump Sum Cancer Rider Form Series LY-LSC-RD. This memorandum supports the rates being filed. This is a new rider form. This memorandum is not intended to be used for any other purpose.

## 2. Benefit Description

The rider provides 100% of the selected benefit amount payable to the insured upon the first ever under the rider diagnosis of invasive cancer or carcinoma in situ.

If the insured is diagnosed within the first 30 days immediately following the effective date of the rider, the benefit amount will be reduced to be 10% of the selected benefit amount and coverage for that insured person will be terminated.

Benefit amounts will range from \$5,000 to \$100,000 in \$1,000 increments.

## 3. Renewability

The renewability of this rider is based on the base policy to which it is attached.

## 4. Morbidity

The morbidity assumptions for cancer and carcinoma in situ were developed using the following sources:

- Cancer: 2000-2003 SEER Cancer Statistics Review
- Carcinoma in Situ: 2000-2003 SEER Cancer Statistics Review, Regional SEER data, and other sources

Basic attained age claim costs were derived from the above sources and have been adjusted to reflect the first ever diagnosis under the rider, take into account the effect of underwriting, and reflect Company experience. Claim costs were provided by Michelle Dyke, FSA, MAAA, Principal and Consulting Actuary of Milliman, Inc.

## 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

## 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse
1	25.0%
2	15.0%
3	12.5%
4	10.0%
5	9.0%
6	9.0%
7+	8.0%

## 7. Expenses

- a) Maintenance expenses are assumed to be 4.5% of premium and 3.0% of claims
- b) Premium taxes are assumed to be 2.0% of premium

## 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 - Cancer Premiums.

## 9. Issue Age Range

The issue ages are based on the base policy to which this rider is attached and may range from 18 to 99.

## 10. Area Factors

There are no area factors for these rider forms. The rates will be the same throughout the state.

## 11. Average Annual Premium

The average annual premium is \$516.50. Premiums are calculated by multiplying the number of units purchased by the annual per \$1,000 benefit premium rates included in Attachment 1-Cancer Premiums.

#### 12. Premium Modalization

	Credit Card	Direct Bill	List Bill	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

## 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new rider forms.

## 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new rider forms.

## 15. Trend Assumptions

No trend has been assumed in this filing.

#### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

## 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 2 - Cancer Loss Ratios.

#### 18. Actuarial Certification

I, Susan Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Hawthorne, ASA, MAAA Associate, Society of Actuaries

Swan Hawthorns

Member, American Academy of Actuaries

January 7, 2014

## <u>Attachment 1 - Cancer Premiums</u> Annual Premiums per \$1,000 Benefit

## Form Series LY-LSC-RD: Lump Sum Cancer Rider

Issue Age	Individual	Couple	One-Parent	Family
18-29	8.82	14.71	10.00	16.47
30-34	8.82	14.71	10.00	16.47
35-39	8.82	14.71	10.00	16.47
40-44	11.18	19.41	12.94	21.18
45-49	14.71	25.88	15.88	27.06
50-54	19.41	33.53	20.00	35.29
55-59	24.71	43.53	25.88	44.71
60-64	31.18	54.71	31.76	55.88
65-69	37.65	65.88	38.24	67.06
70-74	42.94	75.29	43.53	75.88
75-79	44.12	77.65	44.71	78.24
80-84	45.29	79.41	45.88	80.00
85-89	45.88	81.18	46.47	81.76
90-94	47.65	84.12	48.24	84.71
95-99	51.18	90.00	51.76	91.18

## Attachment 2 - Cancer Loss Ratios Anticipated Durational Loss Ratios Form Series LY-LSC-RD

Policy	Earned	S LY-LSC-RD  Incurred	Durational
-	Premium		
<u>Year</u> 1		<u>Claims</u>	Loss Ratio
	1,000.00	359.27	36%
2	767.53	234.91	31%
3	643.12	386.34	60%
4	553.17	333.81	60%
5	486.29	297.23	61%
6	428.50	263.31	61%
7	379.99	239.58	63%
8	338.74	216.15	64%
9	300.55	193.72	64%
10	267.40	174.13	65%
11	237.63	156.39	66%
12	210.23	139.92	67%
13	186.36	125.37	67%
14	164.91	112.13	68%
15	145.34	99.99	69%
16	128.37	89.33	70%
17	113.24	79.71	70%
18	99.77	71.03	71%
19	87.71	63.14	72%
20	77.11	56.13	73%
21	67.71	49.86	74%
22	59.37	44.23	75%
23	51.99	39.16	75%
24	45.40	34.57	76%
25	39.68	30.52	77%
26	34.63	26.92	78%
27	30.18	23.69	79%
28	26.26	20.78	79%
29	22.76	18.12	80%
30	19.77	15.80	80%
31	17.14	13.77	80%
32	14.85	11.94	80%
33	12.84	10.31	80%
34	11.04	8.82	80%
35	9.53	7.53	79%
36	8.21	6.40	78%
37	7.07	5.40	76%
38	6.07	4.51	74%
39	5.17	3.71	72%
40	4.43	3.04	69%
Discounted at		2.0.	02,0
3.24%	5,647.92	3,106.63	55.0%

## <u>Attachment 2 - Cancer Payroll Deduction Premiums</u>

## Annual Premiums per \$1,000 Benefit

Form Series LY-LSC-RD: Lump Sum Cancer Rider

	Individual	Couple	One-Parent	Family
Payroll Rate	12.94	22.94	14.71	24.12

## Actuarial Memorandum Lump Sum Heart and Stroke Rider Form Series LY-LSH-RD

## 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Lump Sum Heart Rider Form Series LY-LSH-RD. This memorandum supports the rates being filed. This is a new rider form. This memorandum is not intended to be used for any other purpose.

## 2. Benefit Description

The rider provides a scheduled benefit payable to the insured upon the first ever diagnosis or procedure under the rider for any of the following qualifying events. The maximum total percentage of the benefit amount payable is 100% of the selected benefit amount.

Qualifying Event	Percentage of Benefit Amount Payable
Heart Attack	100%
Heart Transplant – or combination transplant including heart	100%
Stroke	100%
Coronary Bypass Surgery	25%
Aortic Surgery	25%
Heart Valve Replacement / Repair	25%
Angioplasty	10%
Stent	10%

If an insured person receives a percentage of the benefit amount for one qualifying event in the chart above and then becomes eligible for benefits for another qualifying event, the benefit amount payable for the subsequent qualifying event is the lesser of the percentage amount payable or 100% minus the percentage of the benefit amount received for all previous qualifying events.

Benefit amounts will range from \$5,000 to \$100,000 in \$1,000 increments.

#### 3. Renewability

The renewability of this rider is based on the base policy to which it is attached.

-1-

January 2014

## 4. Morbidity

The morbidity assumptions for each of the heart conditions and procedures covered were developed using the following sources:

- Heart Attack: American Heart Association 2007 Heart and Stroke Statistical Update
- Major Organ Transplant: Milliman Research Reports on Organ and Tissue Transplant Costs and Discussion published in 2002, 2005, and 2006
- Stroke: American Heart Association 2007 Heart and Stroke Statistical Update
- Coronary Artery Bypass Surgery: American Heart Association 2007 Heart and Stroke Statistical Update
- Aortic Surgery: Adult Cardiac Surgery in New York State, 2002-2004
- Heart Valve Replacement / Repair: American Heart Association 2007 Heart and Stroke Statistical Update
- Angioplasty: American Heart Association 2007 Heart and Stroke Statistical Update
- Stent: American Heart Association 2010 Heart Disease and Stroke Statistical Update

Basic attained age claim costs were derived from the above sources and have been adjusted to reflect the first ever diagnosis or procedure under the rider, remove comorbidities, take into account the effect of underwriting, and reflect Company experience. Claim costs were provided by Michelle Dyke, FSA, MAAA, Principal and Consulting Actuary of Milliman, Inc.

## 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

#### 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse
1	25.0%
2	15.0%
3	12.5%
4	10.0%
5	9.0%
6	9.0%
7+	8.0%

## 7. Expenses

- a) Maintenance expenses are assumed to be 4.5% of premium and 3.0% of claims
- b) Premium taxes are assumed to be 2.0% of premium

## 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 - Heart and Stroke Premiums.

## 9. Issue Age Range

The issue ages are based on the base policy to which this rider is attached and may range from 18 to 99.

#### 10. Area Factors

There are no area factors for these rider forms. The rates will be the same throughout the state.

## 11. Average Annual Premium

The average annual premium is \$521.34. Premiums are calculated by multiplying the number of units purchased by the annual per \$1,000 benefit premium rates included in Attachment 1 - Heart and Stroke Premiums.

#### 12. Premium Modalization

	Credit Card	Direct Bill	List Bill	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

## 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new rider forms.

## 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new rider forms.

## 15. Trend Assumptions

No trend has been assumed in this filing.

### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

## 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 2 - Heart and Stroke Loss Ratios.

#### 18. Actuarial Certification

I, Susan Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Hawthorne, ASA, MAAA Associate, Society of Actuaries

Member, American Academy of Actuaries

Susan Hawthorne

January 7, 2014

## <u>Attachment 1 - Heart and Stroke Premiums</u> Annual Premiums per \$1,000 Benefit

## Form Series LY-LSH-RD: Lump Sum Heart and Stroke Rider

Issue Age	Individual	Couple	One-Parent	Family
18-29	8.24	13.53	8.82	14.12
30-34	8.24	13.53	8.82	14.12
35-39	8.24	13.53	8.82	14.12
40-44	11.18	18.82	11.76	19.41
45-49	14.71	25.29	15.29	25.88
50-54	18.82	32.94	19.41	33.53
55-59	24.12	42.35	24.71	42.94
60-64	31.18	54.71	31.76	55.29
65-69	39.41	69.41	40.00	70.00
70-74	50.00	88.24	50.59	88.82
75-79	61.18	108.24	61.76	108.82
80-84	71.76	126.47	72.35	127.06
85-89	81.18	142.94	81.76	143.53
90-94	89.41	157.65	90.00	158.24
95-99	96.47	170.00	97.06	170.59

# <u>Attachment 1 - Heart and Stroke Restoration Premiums</u> Annual Premiums per \$1,000 Benefit

## Form Series LY-HR-RD: Lump Sum Heart and Stroke Restoration Rider

Issue Age	Individual	Couple	One-Parent	Family
18-29	0.82	1.35	0.88	1.41
30-34	0.82	1.35	0.88	1.41
35-39	0.82	1.35	0.88	1.41
40-44	1.12	1.88	1.18	1.94
45-49	1.47	2.59	1.53	2.65
50-54	1.88	3.29	1.94	3.35
55-59	2.41	4.24	2.47	4.29
60-64	3.12	5.47	3.18	5.53
65-69	4.00	7.00	4.06	7.06
70-74	4.00	7.00	4.06	7.06
75-79	4.00	7.00	4.06	7.06
80-84	4.00	7.00	4.06	7.06
85-89	4.00	7.00	4.06	7.06
90-94	4.00	7.00	4.06	7.06
95-99	4.00	7.00	4.06	7.06

# Loyal American Life Insurance Company <u>Attachment 2 - Heart and Stroke Loss Ratios</u> Anticipated Durational Loss Ratios Form Series LY-LSH-RD

Year         Premium         Claims         Loss Ratio           1         1,000.00         315.83         32%           2         764.56         212.14         28%           3         638.38         398.90         62%           4         546.82         342.29         63%           5         479.65         303.75         63%           6         422.52         268.65         64%           7         373.99         244.29         65%           8         332.80         219.70         66%           9         295.26         196.53         67%           10         262.35         176.04         67%           11         232.84         157.56         68%           12         206.15         140.67         68%           13         182.53         125.55         69%           14         161.29         111.79         69%           15         142.33         99.44         70%           16         125.59         88.50         70%           17         110.66         78.60         71%           19         85.50         61.57         72%	Policy	Earned	Incurred	Durational
2       764.56       212.14       28%         3       638.38       398.90       62%         4       546.82       342.29       63%         5       479.65       303.75       63%         6       422.52       268.65       64%         7       373.99       244.29       65%         8       332.80       219.70       66%         9       295.26       196.53       67%         10       262.35       176.04       67%         11       232.84       157.56       68%         12       206.15       140.67       68%         13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         25       38.40	<u>Year</u>	<u>Premium</u>	<u>Claims</u>	Loss Ratio
2       764.56       212.14       28%         3       638.38       398.90       62%         4       546.82       342.29       63%         5       479.65       303.75       63%         6       422.52       268.65       64%         7       373.99       244.29       65%         8       332.80       219.70       66%         9       295.26       196.53       67%         10       262.35       176.04       67%         11       232.84       157.56       68%         12       206.15       140.67       68%         13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         25       38.40	1	1,000.00	315.83	32%
3       638.38       398.90       62%         4       546.82       342.29       63%         5       479.65       303.75       63%         6       422.52       268.65       64%         7       373.99       244.29       65%         8       332.80       219.70       66%         9       295.26       196.53       67%         10       262.35       176.04       67%         11       232.84       157.56       68%         12       206.15       140.67       68%         13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       19.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43	2		212.14	
5       479.65       303.75       63%         6       422.52       268.65       64%         7       373.99       244.29       65%         8       332.80       219.70       66%         9       295.26       196.53       67%         10       262.35       176.04       67%         11       232.84       157.56       68%         12       206.15       140.67       68%         13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         26       33.48 <t< td=""><td>3</td><td>638.38</td><td>398.90</td><td></td></t<>	3	638.38	398.90	
6       422.52       268.65       64%         7       373.99       244.29       65%         8       332.80       219.70       66%         9       295.26       196.53       67%         10       262.35       176.04       67%         11       232.84       157.56       68%         12       206.15       140.67       68%         13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         29       21.96 <td< td=""><td>4</td><td>546.82</td><td>342.29</td><td>63%</td></td<>	4	546.82	342.29	63%
7       373.99       244.29       65%         8       332.80       219.70       66%         9       295.26       196.53       67%         10       262.35       176.04       67%         11       232.84       157.56       68%         12       206.15       140.67       68%         13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         29       21.96       16.80       77%         30       19.06	5	479.65	303.75	63%
8       332.80       219.70       66%         9       295.26       196.53       67%         10       262.35       176.04       67%         11       232.84       157.56       68%         12       206.15       140.67       68%         13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         32       14.30       1	6	422.52	268.65	64%
9	7	373.99	244.29	65%
10       262.35       176.04       67%         11       232.84       157.56       68%         12       206.15       140.67       68%         13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         30       19.06       14.60       77%         31       16.52       12.	8	332.80	219.70	66%
11       232.84       157.56       68%         12       206.15       140.67       68%         13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         32       14.30       11.01	9	295.26	196.53	67%
12       206.15       140.67       68%         13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01 </td <td>10</td> <td>262.35</td> <td>176.04</td> <td>67%</td>	10	262.35	176.04	67%
13       182.53       125.55       69%         14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         34       10.64       8.07	11	232.84	157.56	68%
14       161.29       111.79       69%         15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07	12	206.15	140.67	68%
15       142.33       99.44       70%         16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       <	13	182.53	125.55	69%
16       125.59       88.50       70%         17       110.66       78.60       71%         18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	14	161.29	111.79	69%
17       110.66       78.60       71%         18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	15	142.33	99.44	70%
18       97.38       69.67       72%         19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	16	125.59	88.50	70%
19       85.50       61.57       72%         20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	17	110.66	78.60	71%
20       75.09       54.45       73%         21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	18	97.38	69.67	72%
21       65.85       48.16       73%         22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	19	85.50	61.57	72%
22       57.66       42.47       74%         23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	20	75.09	54.45	73%
23       50.43       37.38       74%         24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	21	65.85	48.16	73%
24       44.00       32.77       74%         25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	22	57.66	42.47	74%
25       38.40       28.78       75%         26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	23	50.43	37.38	74%
26       33.48       25.31       76%         27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	24	44.00	32.77	74%
27       29.14       22.17       76%         28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	25	38.40	28.78	75%
28       25.34       19.36       76%         29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	26	33.48	25.31	76%
29       21.96       16.80       77%         30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	27	29.14	22.17	76%
30       19.06       14.60       77%         31       16.52       12.72       77%         32       14.30       11.01       77%         33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	28	25.34	19.36	76%
31     16.52     12.72     77%       32     14.30     11.01     77%       33     12.36     9.47     77%       34     10.64     8.07     76%       35     9.19     6.86     75%       36     7.92     5.81     73%	29	21.96	16.80	77%
32     14.30     11.01     77%       33     12.36     9.47     77%       34     10.64     8.07     76%       35     9.19     6.86     75%       36     7.92     5.81     73%	30	19.06	14.60	77%
33       12.36       9.47       77%         34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%	31	16.52	12.72	77%
34       10.64       8.07       76%         35       9.19       6.86       75%         36       7.92       5.81       73%				
35       9.19       6.86       75%         36       7.92       5.81       73%	33	12.36	9.47	77%
36 7.92 5.81 73%	34		8.07	76%
	35	9.19	6.86	75%
0.01		7.92	5.81	73%
5/ 6.81 4.85 71%	37	6.81	4.85	71%
38 5.85 3.99 68%	38	5.85	3.99	68%
39 5.00 3.21 64%	39	5.00	3.21	64%
40 4.28 2.57 60%		4.28	2.57	60%
Discounted at 3.24% 5,581.07 3,069.88 55.0%		5,581.07	3,069.88	55.0%

# <u>Attachment 2 - Heart and Stroke Payroll Deduction Premiums</u> Annual Premiums per \$1,000 Benefit

## Form Series LY-LSH-RD: Lump Sum Heart and Stroke Rider

	Individual	Couple	One-Parent	Family
Payroll Rate	12.94	22.35	13.53	22.94

SERFF Tracking #: UTAC-129368050 State Tracking #: LOYAL LSC/LSH

State: District of Columbia Filing Company: Loyal American Life Insurance Company

TOI/Sub-TOI: H07I Individual Health - Specified Disease - Limited Benefit/H07I.001 Critical Illness

Product Name: Loyal LSC/LSH

Project Name/Number: Loyal LSC/LSH/Loyal LSC/LSH

## **Supporting Document Schedules**

Satisfied - Item:	Cover Letter All Filings
Comments:	
Attachment(s):	Cover Letter -Forms - Arbitration.pdf
Item Status:	
Status Date:	
Bypassed - Item:	Certificate of Authority to File
Bypass Reason:	N/A
Attachment(s):	
Item Status:	
Status Date:	
Satisfied - Item:	Actuarial Memorandum
Comments:	
Attachment(s):	Actuarial Memorandum - Intensive Care Unit Indemnity Rider.pdf Actuarial Memorandum - Cancer Base.pdf Actuarial Memorandum - Hospital and Intensive Care Unit Indemnity Rider.pdf Actuarial Memorandum - Hospital Indemnity Rider.pdf Actuarial Memorandum - Cancer Rider.pdf Actuarial Memorandum - Heart Base.pdf Actuarial Memorandum - Heart Rider.pdf
Item Status:	
Status Date:	
Satisfied - Item:	Actuarial Justification
Comments:	Actuarial Memorandum is on rate tab and supporting doucments tab.
Attachment(s):	The state of the s
Item Status:	
Status Date:	
Bypassed - Item:	District of Columbia and Countrywide Loss Ratio Analysis (P&C)
Bypass Reason:	n/a
Attachment(s):	
Item Status:	
Status Date:	

SERFF Tracking #:	UTAC-129368050	State Tracking #:		Company Tracking #:	LOYAL LSC/LSH
State:	District of Columbia		Filing Company:	Loyal American Life	Insurance Company
TOI/Sub-TOI:		- Specified Disease - Limited Benefit/H0	71.001 Critical Illness		
Product Name:	Loyal LSC/LSH				
Project Name/Number:	Loyal LSC/LSH/Loyal	LSC/LSH			
Bypassed - Item:	Distric	ct of Columbia and Countrywide E	Experience for the La	st 5 Years (P&C)	
Bypass Reason:	n/a-ne	ew filing, no experience to provide	e.		
Attachment(s):					
Item Status:					
Status Date:					
Bypassed - Item:	Actua	rial Memorandum and Certification	ons		
Bypass Reason:	Part I	Rate Review is not required.			
Attachment(s):					
Item Status:					
Status Date:					
Bypassed - Item:	Unifie	d Rate Review Template			
Bypass Reason:	Not a Not a	rate increase, new filing. QHP.			
Attachment(s):					
Item Status:					
Status Date:					
Satisfied - Item:	Resp	onse Letter			
Comments:					
Attachment(s):	Resp	onse to DC objection letter dated	2-11-2014.pdf		
Item Status:	·		-		
Status Date:					
Satisfied - Item:	Detail	led make-up of Expense summar	ту		
Comments:		· ·	-		
Attachment(s):	Detail	led Make-up of Expenses Summa	ary.pdf		
Item Status:		· ·			
Status Date:					



[P.O. Box 559004, Austin, TX 78755-9004] [Toll Free: 866-459-4272]

## Filing Description:

Re: Loyal American Life Insurance Company

NAIC # 65722 FEIN # 63-0343428

**NEW POLICY FORMS DESCRIPTION** 

LY-LSH-BA-B-DC Lump Sum Heart and Stroke Policy

LY-LSH-BA.SCH.PG-DC Schedule Page

LY-HR-RD-DC Heart & Stroke Restoration Benefit Rider-Can only be sold with Heart

Policy

LY-LSH-RD-DC Lump Sum Heart and Stroke Rider LY-LSC-BA-B-DC Lump Sum Cancer Policy

LY-LSC-BA.SCH.PG-DC Schedule Page

LY-CR-RD Cancer Recurrence Benefit Rider-Can only be sold with Cancer Policy

LY-LSC-RD-DC Lump Sum Cancer Rider

LY-HICU-RD-DC Hospital and Intensive Care Unit Indemnity Benefit Rider

LY-HI-RD-DC Hospital Indemnity Benefit Rider

LY-ICU-RD-DC Intensive Care Unit Indemnity Benefit Rider
LY-LSC-OC-B-DC Lump Sum Cancer Outline of Coverage
LY-LSH-OC-B-DC Lump Sum Heart Outline of Coverage
LY-LSCH-APP-B-DC Lump Sum Cancer/Heart Application

ROP-D Return of Premium Rider

#### **Actuarial Memorandum Rates**

The forms and rates described above are submitted for review and approval. These forms and rates are new and do not replace any forms or rates previously approved by your department.

The policy forms and riders described above will provide Lump Sum Cancer and Lump Sum Heart and Stroke coverage and benefits and will be sold through licensed agents.

These rates are new and do not replace any rates previously approved by your department. We currently do not have any D.C policyholders as this is a new filing. The proposed Effective Date will be date of approval from the DOI.

To be used with previously approved endorsement L-4465 approved on 3-7-1995.

PLEASE NOTE THAT THIS POLICY INCLUDES A BINDING ARBITRATION PROVISION.
WE ARE UNCLEAR AS TO YOUR STATE'S REGULATTORY POSITION ON THIS. IF THIS IS AN UNACCEPTABLE PRACTICE, PLEASE ADVISE ON ACCEPTABLE ARBITRATION PROVISIONS.

The documents were prepared on a personal computer and will ultimately be printed from another date processing system that may cause some print style and/or page spacing changes. However, there will not be any changes to the actual text of the contract other than listed or bracketed variables.

If there are any questions or comments, please call me at (800) 633-6752 extension 4945, or email me at Ashley.Heath@Cigna.com.

Sincerely, Ashley Heath Compliance Senior Associate Loyal American Life Insurance Company

## Actuarial Memorandum Intensive Care Unit Indemnity Benefit Rider Form Series LY-ICU-RD

## 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Intensive Care Unit Benefit Rider Form Series LY-ICU-RD. This memorandum supports the rates being filed. This is a new rider form. This memorandum is not intended to be used for any other purpose.

## 2. Benefit Description

The rider provides a selected intensive care unit indemnity benefit amount for each day that an insured person is confined to the Intensive Care unit or Coronary Care unit as an inpatient. The confinement must be for at least 24 hours and benefits will not be payable for more than 30 days for any one period of confinement. The confinement must be due to injury, sickness, or complications from pregnancy. Daily intensive care unit indemnity benefit amounts range from \$100 to \$1000 per day in \$100 increments. Benefits are reduced 50% for confinements which begin on or after an insured's 65% birthday.

## 3. Renewability

The renewability of the rider is based on the base policy to which it is attached.

## 4. Morbidity

The morbidity assumptions for the rider were developed using Milliman's 2010  $Health Cost Guidelines^{TM}$ .

#### 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

## 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse
1	25.0%
2	15.0%
3	12.5%
4	10.0%
5	9.0%
6	9.0%
7+	8.0%

## 7. Expenses

- a) Maintenance expenses are assumed to be 4.5% of premium and 3.0% of claims
- b) Premium taxes are assumed to be 2.0% of premium

#### 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 - Intensive Care Unit Indemnity Premiums.

Premiums for payroll deduction policies will vary by rate class and benefit amount and are included in Attachment 2 – Intensive Care Unit Indemnity Payroll Deduction Premiums.

## 9. Issue Age Range

The issue ages are based on the base policy to which this rider is attached and may range from 18 to 99.

#### 10. Area Factors

There are no area factors for these forms. The rates will be the same throughout the state.

## 11. Average Annual Premium

The average annual premium is \$74.11. This is based on a daily benefit amount of \$300. Premiums are calculated by multiplying the number of units purchased by the annual per \$100 daily benefit premium rates included in Attachment 1 - Intensive Care Unit Indemnity Premiums or Attachment 2 - Intensive Care Unit Indemnity Payroll Deduction Premiums.

#### 12. Premium Modalization

	Credit		Payroll	
	Card	Direct Bill	Deduction	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

#### 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new forms.

#### 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new forms.

## 15. Trend Assumptions

No trend has been assumed in this filing.

#### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

## 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 3 - Intensive Care Unit Indemnity Loss Ratios.

#### 18. Actuarial Certification

I, Susan Buck Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Buck Hawthorne, ASA, MAAA

Associate, Society of Actuaries

Member, American Academy of Actuaries

January 13, 2014

## Actuarial Memorandum Lump Sum Cancer Policy Form Series LY-LSC-BA

## 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Lump Sum Cancer Policy Form Series LY-LSC-BA. This memorandum supports the rates being filed. This is a new policy form. This memorandum is not intended to be used for any other purpose.

## 2. Benefit Description

The policy provides 100% of the selected benefit amount payable to the insured upon the first ever under the policy diagnosis of invasive cancer or carcinoma in situ.

If the insured is diagnosed within the first 30 days immediately following the effective date of the policy, the benefit amount will be reduced to be 10% of the selected benefit amount and coverage for that insured person will be terminated.

Benefit amounts will range from \$5,000 to \$100,000 in \$1,000 increments.

In addition to the base policy, an optional cancer recurrence benefit rider (form LY-CR-RD) is available. The rider benefit amount is the same as the base benefit amount. The rider pays a percentage of the benefit amount upon additional diagnoses of invasive cancer or carcinoma in situ as shown in the table below. The recurrence benefit applies when 100% of the original benefit has been paid and the insured person has not received advice or treatment for cancer for at least 24 consecutive months from the date of the last diagnosis under the policy and the rider. Up to an additional 100% of the benefit amount is payable under the recurrence benefit rider. If a percentage of the recurrence benefit amount is paid and the insured person then becomes eligible for a subsequent recurrence benefit, the amount payable for the subsequent recurrence benefit is the lesser of the percentage amount payable and 100% minus the percentage of the recurrence benefit amount received for all previous recurrence benefits.

Time Period Without Advice or Treatment	% of Cancer Recurrence Benefit Amount Payable
Less than 24 months	0%
24 months or more but less than 5 years	25%
5 years or more but less than 10 years	75%
More than 10 years	100%

## 3. Renewability

This policy is guaranteed renewable for life.

## 4. Morbidity

The morbidity assumptions for cancer and carcinoma in situ were developed using the following sources:

- Cancer: 2000-2003 SEER Cancer Statistics Review
- Carcinoma in Situ: 2000-2003 SEER Cancer Statistics Review, Regional SEER data, and other sources

Basic attained age claim costs were derived from the above sources and have been adjusted to reflect the first ever diagnosis under the policy, take into account the effect of underwriting, and reflect Company experience. Claim costs were provided by Michelle Dyke, FSA, MAAA, Principal and Consulting Actuary of Milliman, Inc.

## 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

## 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse			
1	25.0%			
2	15.0%			
3	12.5%			
4	10.0%			
5	9.0%			
6	9.0%			
7+	8.0%			

## 7. Expenses

- a) Acquisition expenses are assumed to be \$25 per policy subject to 2% annual inflation
- b) Maintenance expenses are assumed to be \$20 per policy subject to 2% annual inflation, 4.5% of premium, and 3.0% of claims
- c) Premium taxes are assumed to be 2.0% of premium

#### 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates for the base and optional recurrence rider are included in Attachment 1 - Cancer Premiums and Attachment 1 - Cancer Recurrence Premiums.

## 9. Issue Age Range

The issue age range for the policyholder is 18 to 99.

#### 10. Area Factors

There are no area factors for these forms. The rates will be the same throughout the state.

## 11. Average Annual Premium

The average annual premium is \$531.02. Premiums are calculated by multiplying the number of units purchased by the annual per \$1,000 benefit premium rates included in Attachment 1 - Cancer Premiums and Attachment 1 - Cancer Recurrence Premiums.

#### 12. Premium Modalization

	Credit Card	Direct Bill	List Bill	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

## 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new forms.

## 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new forms.

## 15. Trend Assumptions

No trend has been assumed in this filing.

## 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

## 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 2 - Cancer Loss Ratios.

## 18. Actuarial Certification

I, Susan Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Hawthorne, ASA, MAAA

Associate, Society of Actuaries Member, American Academy of Actuaries

January 7, 2014

## Actuarial Memorandum

Hospital and Intensive Care Unit Indemnity Benefit Rider Form Series LY-HICU-RD

## 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Hospital and Intensive Care Unit Indemnity Benefit Rider Form Series LY-HICU-RD. This memorandum supports the rates being filed. This is a new rider form. This memorandum is not intended to be used for any other purpose.

## 2. Benefit Description

The rider provides a selected hospital indemnity benefit amount for each day that an insured person is confined to a Hospital as an inpatient. It will pay twice the selected hospital indemnity benefit amount for each day that an insured person is confined to the Intensive Care unit or Coronary Care unit as an inpatient. The confinement must be for at least 24 hours and benefits will not be payable for more than 30 days for any one period of confinement. The confinement must be due to injury, sickness, or complications from pregnancy. Daily hospital indemnity benefit amounts range from \$100 to \$1000 per day in \$100 increments. Benefits are reduced 50% for confinements which begin on or after an insured's 65th birthday.

## 3. Renewability

The renewability of the rider is based on the base policy to which it is attached.

## 4. Morbidity

The morbidity assumptions for the rider were developed using Milliman's 2010  $Health\ Cost\ Guidelines^{TM}$ .

## 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

## 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse			
1	25.0%			
2	15.0%			
3	12.5%			
4	10.0%			
5-6	9.0%			
7+	8.0%			

## 7. Expenses

- a) Maintenance expenses are assumed to be 4.5% of premium and 3.0% of claims
- b) Premium taxes are assumed to be 2.0% of premium

#### 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 – Hospital and Intensive Care Unit Indemnity Premiums.

Premiums for payroll policies will vary by rate class and benefit amount and are included in Attachment 2 – Hospital and Intensive Care Unit Indemnity Payroll Deduction Premiums.

## 9. Issue Age Range

The issue ages are based on the base policy to which this rider is attached and may range from 18 to 99.

#### 10. Area Factors

There are no area factors for these forms. The rates will be the same throughout the state.

## 11. Average Annual Premium

The average annual premium is \$377.09. This is based on a daily benefit amount of \$300. Premiums are calculated by multiplying the number of units purchased by the annual per \$100 daily benefit premium rates included in Attachment 1 – Hospital and Intensive Care Unit Indemnity Premiums or Attachment 2 – Hospital and Intensive Care Unit Indemnity Payroll Deduction Premiums.

## 12. Premium Modalization

	Credit		Payroll	
	Card	Direct Bill	Deduction	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

#### 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new forms.

#### 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new forms.

## 15. Trend Assumptions

No trend has been assumed in this filing.

#### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

## 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 3 - Hospital and Intensive Care Unit Indemnity Loss Ratios.

#### 18. Actuarial Certification

I, Susan Buck Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Buck Hawthorne, ASA, MAAA Associate, Society of Actuaries

Member, American Academy of Actuaries

Sidan Buck Hawthorn

January 13, 2014

# Actuarial Memorandum Hospital Indemnity Benefit Rider Form Series LY-HI-RD

# 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Hospital Indemnity Benefit Rider Form Series LY-HI-RD. This memorandum supports the rates being filed. This is a new rider form. This memorandum is not intended to be used for any other purpose.

# 2. Benefit Description

The rider provides a selected hospital indemnity benefit amount for each day that an insured person is confined to a Hospital as an inpatient, including confinement to the Intensive Care Unit or Coronary Care unit. The confinement must be for at least 24 hours and benefits will not be payable for more than 30 days for any one period of confinement. The confinement must be due to injury, sickness, or complications from pregnancy. Daily hospital indemnity benefit amounts range from \$100 to \$1000 per day in \$100 increments. Benefits are reduced 50% for confinements which begin on or after an insured's 65th birthday.

### 3. Renewability

The renewability of the rider is based on the base policy to which it is attached.

# 4. Morbidity

The morbidity assumptions for the rider were developed using Milliman's 2010  $Health Cost Guidelines^{TM}$ .

#### 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

# 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse
1	25.0%
2	15.0%
3	12.5%
4	10.0%
5	9.0%
6	9.0%
7+	8.0%

# 7. Expenses

- a) Maintenance expenses are assumed to be 4.5% of premium and 3.0% of claims
- b) Premium taxes are assumed to be 2.0% of premium

### 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 - Hospital Indemnity Premiums.

Premiums for payroll deduction policies will vary by rate class and benefit amount and are included in Attachment 2 - Hospital Indemnity Payroll Deduction Premiums.

## 9. Issue Age Range

The issue ages are based on the base policy to which this rider is attached and may range from 18 to 99.

#### 10. Area Factors

There are no area factors for these forms. The rates will be the same throughout the state.

# 11. Average Annual Premium

The average annual premium is \$327.68. This is based on a daily benefit amount of \$300. Premiums are calculated by multiplying the number of units purchased by the annual per \$100 daily benefit premium rates included in Attachment 1 - Hospital Indemnity Premiums or Attachment 2 - Hospital Indemnity Payroll Deduction Premiums.

#### 12. Premium Modalization

	Credit		Payroll	
	Card	Direct Bill	Deduction	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

#### 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new forms.

#### 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new forms.

# 15. Trend Assumptions

No trend has been assumed in this filing.

### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

# 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 3 - Hospital Indemnity Loss Ratios.

#### 18. Actuarial Certification

I, Susan Buck Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Buck Hawthorne, ASA, MAAA

Associate, Society of Actuaries

Member, American Academy of Actuaries

January 13, 2014

# Actuarial Memorandum Lump Sum Cancer Rider Form Series LY-LSC-RD

### 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Lump Sum Cancer Rider Form Series LY-LSC-RD. This memorandum supports the rates being filed. This is a new rider form. This memorandum is not intended to be used for any other purpose.

# 2. Benefit Description

The rider provides 100% of the selected benefit amount payable to the insured upon the first ever under the rider diagnosis of invasive cancer or carcinoma in situ.

If the insured is diagnosed within the first 30 days immediately following the effective date of the rider, the benefit amount will be reduced to be 10% of the selected benefit amount and coverage for that insured person will be terminated.

Benefit amounts will range from \$5,000 to \$100,000 in \$1,000 increments.

### 3. Renewability

The renewability of this rider is based on the base policy to which it is attached.

# 4. Morbidity

The morbidity assumptions for cancer and carcinoma in situ were developed using the following sources:

- Cancer: 2000-2003 SEER Cancer Statistics Review
- Carcinoma in Situ: 2000-2003 SEER Cancer Statistics Review, Regional SEER data, and other sources

Basic attained age claim costs were derived from the above sources and have been adjusted to reflect the first ever diagnosis under the rider, take into account the effect of underwriting, and reflect Company experience. Claim costs were provided by Michelle Dyke, FSA, MAAA, Principal and Consulting Actuary of Milliman, Inc.

### 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

## 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse	
1	25.0%	
2	15.0%	
3	12.5%	
4	10.0%	
5	9.0%	
6	9.0%	
7+	8.0%	

# 7. Expenses

- a) Maintenance expenses are assumed to be 4.5% of premium and 3.0% of claims
- b) Premium taxes are assumed to be 2.0% of premium

### 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 - Cancer Premiums.

# 9. Issue Age Range

The issue ages are based on the base policy to which this rider is attached and may range from 18 to 99.

### 10. Area Factors

There are no area factors for these rider forms. The rates will be the same throughout the state.

### 11. Average Annual Premium

The average annual premium is \$516.50. Premiums are calculated by multiplying the number of units purchased by the annual per \$1,000 benefit premium rates included in Attachment 1-Cancer Premiums.

#### 12. Premium Modalization

	Credit Card	Direct Bill	List Bill	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

### 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new rider forms.

### 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new rider forms.

# 15. Trend Assumptions

No trend has been assumed in this filing.

#### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

# 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 2 - Cancer Loss Ratios.

#### 18. Actuarial Certification

I, Susan Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Hawthorne, ASA, MAAA Associate, Society of Actuaries

Swan Hawthorns

Member, American Academy of Actuaries

January 7, 2014

# Actuarial Memorandum Lump Sum Heart and Stroke Policy Form Series LY-LSH-BA

# 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Lump Sum Heart and Stroke Policy Form Series LY-LSH-BA. This memorandum supports the rates being filed. This is a new policy form. This memorandum is not intended to be used for any other purpose.

# 2. Benefit Description

The policy provides a scheduled benefit payable to the insured upon the first ever diagnosis or procedure under the policy for any of the following qualifying events. The maximum total percentage of the benefit amount payable is 100% of the selected benefit amount.

Qualifying Event	Percentage of Benefit Amount Payable
Heart Attack	100%
Heart Transplant – or combination transplant including heart	100%
Stroke	100%
Coronary Bypass Surgery	25%
Aortic Surgery	25%
Heart Valve Replacement / Repair	25%
Angioplasty	10%
Stent	10%

If an insured person receives a percentage of the benefit amount for one qualifying event in the chart above and then becomes eligible for benefits for another qualifying event, the benefit amount payable for the subsequent qualifying event is the lesser of the percentage amount payable or 100% minus the percentage of the benefit amount received for all previous qualifying events.

Benefit amounts will range from \$5,000 to \$100,000 in \$1,000 increments.

In addition to the base policy, an optional heart and stroke restoration benefit rider (form LY-HR-RD) is available. The rider benefit amount is the same as the base benefit amount. The rider pays a percentage of the benefit amount upon an additional diagnosis or procedure of heart attack, heart transplant, or stroke as shown in the table below. The restoration benefit applies when 100% of the original benefit has been paid and the insured person has not received advice or treatment from a physician for these specific qualifying events for at least 24 months from the date of the last diagnosis or qualifying event under the policy and the rider. Up to an additional 100% of the benefit amount is payable under the restoration benefit rider. If a percentage of the restoration benefit amount is paid and the insured person then

becomes eligible for a subsequent restoration benefit, the amount payable for the subsequent restoration benefit is the lesser of the percentage amount payable and 100% minus the percentage of the restoration benefit amount received for all previous restoration benefits.

Time Period Without Advice or Treatment	% of Heart and Stroke Restoration Benefit Amount Payable
Less than 24 months	0%
24 months or more but less than 5 years	25%
5 years or more but less than 10 years	75%
More than 10 years	100%

## 3. Renewability

This policy is guaranteed renewable for life.

## 4. Morbidity

The morbidity assumptions for each of the heart conditions and procedures covered were developed using the following sources:

- Heart Attack: American Heart Association 2007 Heart and Stroke Statistical Update
- Major Organ Transplant: Milliman Research Reports on Organ and Tissue Transplant Costs and Discussion published in 2002, 2005, and 2006
- Stroke: American Heart Association 2007 Heart and Stroke Statistical Update
- Coronary Artery Bypass Surgery: American Heart Association 2007 Heart and Stroke Statistical Update
- Aortic Surgery: Adult Cardiac Surgery in New York State, 2002-2004
- Heart Valve Replacement / Repair: American Heart Association 2007 Heart and Stroke Statistical Update
- Angioplasty: American Heart Association 2007 Heart and Stroke Statistical Update
- Stent: American Heart Association 2010 Heart Disease and Stroke Statistical Update

Basic attained age claim costs were derived from the above sources and have been adjusted to reflect the first ever diagnosis or procedure under the policy, remove comorbidities, take into account the effect of underwriting, and reflect Company experience. Claim costs were provided by Michelle Dyke, FSA, MAAA, Principal and Consulting Actuary of Milliman, Inc.

## 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

### 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse
1	25.0%
2	15.0%
3	12.5%
4	10.0%
5	9.0%
6	9.0%
7+	8.0%

# 7. Expenses

- a) Acquisition expenses are assumed to be \$25 per policy subject to 2% annual inflation
- b) Maintenance expenses are assumed to be \$20 per policy subject to 2% annual inflation, 4.5% of premium, and 3.0% of claims
- c) Premium taxes are assumed to be 2.0% of premium

### 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 - Heart and Stroke Premiums and Attachment 1 - Heart and Stroke Restoration Premiums.

# 9. Issue Age Range

The issue age range for the policyholder is 18 to 99.

### 10. Area Factors

There are no area factors for these forms. The rates will be the same throughout the state.

# 11. Average Annual Premium

The average annual premium is \$540.17. Premiums are calculated by multiplying the number of units purchased by the annual per \$1,000 benefit premium rates included in Attachment 1 - Heart and Stroke Premiums and Attachment 1 - Heart and Stroke Restoration Premiums.

#### 12. Premium Modalization

	Credit Card	Direct Bill	List Bill	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

## 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new forms.

#### 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new forms.

## 15. Trend Assumptions

No trend has been assumed in this filing.

#### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

## 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 2 - Heart and Stroke Loss Ratios.

## 18. Actuarial Certification

I, Susan Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Hawthorne, ASA, MAAA Associate, Society of Actuaries

Member, American Academy of Actuaries

January 7, 2014

# Actuarial Memorandum Lump Sum Heart and Stroke Rider Form Series LY-LSH-RD

### 1. Scope & Purpose

This Actuarial Memorandum describes the benefits provided in the Lump Sum Heart Rider Form Series LY-LSH-RD. This memorandum supports the rates being filed. This is a new rider form. This memorandum is not intended to be used for any other purpose.

# 2. Benefit Description

The rider provides a scheduled benefit payable to the insured upon the first ever diagnosis or procedure under the rider for any of the following qualifying events. The maximum total percentage of the benefit amount payable is 100% of the selected benefit amount.

<b>Qualifying Event</b>	Percentage of Benefit Amount Payable
Heart Attack	100%
Heart Transplant – or combination transplant including heart	100%
Stroke	100%
Coronary Bypass Surgery	25%
Aortic Surgery	25%
Heart Valve Replacement / Repair	25%
Angioplasty	10%
Stent	10%

If an insured person receives a percentage of the benefit amount for one qualifying event in the chart above and then becomes eligible for benefits for another qualifying event, the benefit amount payable for the subsequent qualifying event is the lesser of the percentage amount payable or 100% minus the percentage of the benefit amount received for all previous qualifying events.

Benefit amounts will range from \$5,000 to \$100,000 in \$1,000 increments.

### 3. Renewability

The renewability of this rider is based on the base policy to which it is attached.

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January 2014

### 4. Morbidity

The morbidity assumptions for each of the heart conditions and procedures covered were developed using the following sources:

- Heart Attack: American Heart Association 2007 Heart and Stroke Statistical Update
- Major Organ Transplant: Milliman Research Reports on Organ and Tissue Transplant Costs and Discussion published in 2002, 2005, and 2006
- Stroke: American Heart Association 2007 Heart and Stroke Statistical Update
- Coronary Artery Bypass Surgery: American Heart Association 2007 Heart and Stroke Statistical Update
- Aortic Surgery: Adult Cardiac Surgery in New York State, 2002-2004
- Heart Valve Replacement / Repair: American Heart Association 2007 Heart and Stroke Statistical Update
- Angioplasty: American Heart Association 2007 Heart and Stroke Statistical Update
- Stent: American Heart Association 2010 Heart Disease and Stroke Statistical Update

Basic attained age claim costs were derived from the above sources and have been adjusted to reflect the first ever diagnosis or procedure under the rider, remove comorbidities, take into account the effect of underwriting, and reflect Company experience. Claim costs were provided by Michelle Dyke, FSA, MAAA, Principal and Consulting Actuary of Milliman, Inc.

# 5. Mortality

Mortality used is 100% of the 2001 CSO Table, ALB.

#### 6. Persistency

The assumed persistency rates are the complement of the lapse rates illustrated below.

Duration	Lapse	
1	25.0%	
2	15.0%	
3	12.5%	
4	10.0%	
5	9.0%	
6	9.0%	
7+	8.0%	

### 7. Expenses

- a) Maintenance expenses are assumed to be 4.5% of premium and 3.0% of claims
- b) Premium taxes are assumed to be 2.0% of premium

### 8. Premium Classes

Premiums will vary by rate class, issue age, and benefit amount. Premium rates are included in Attachment 1 - Heart and Stroke Premiums.

# 9. Issue Age Range

The issue ages are based on the base policy to which this rider is attached and may range from 18 to 99.

#### 10. Area Factors

There are no area factors for these rider forms. The rates will be the same throughout the state.

# 11. Average Annual Premium

The average annual premium is \$521.34. Premiums are calculated by multiplying the number of units purchased by the annual per \$1,000 benefit premium rates included in Attachment 1 - Heart and Stroke Premiums.

#### 12. Premium Modalization

	Credit Card	Direct Bill	List Bill	PAC
Monthly	0.0850	N/A	0.0900	0.0850
Quarterly	0.2650	0.2650	0.2650	0.2650
Semi-Annual	0.5200	0.5200	0.5200	0.5200
Annual	1.0000	1.0000	1.0000	1.0000

# 13. Claim Liability and Reserves

Claim reserves will be set using appropriate actuarial methodology. There are currently no claim reserves held since these are new rider forms.

## 14. Active Life Reserves

Active life reserves will be set using appropriate actuarial methodology. There are currently no active life reserves held since these are new rider forms.

### 15. Trend Assumptions

No trend has been assumed in this filing.

#### 16. Minimum Loss Ratio

The minimum acceptable loss ratio is 55.0%.

## 17. Anticipated Loss Ratio

The anticipated loss ratio is expected to be 55.0%. This loss ratio equals the present value of benefits divided by the present value of annual premiums over a 40-year period, assuming a 3.24% discount rate. Durational loss ratios are included in Attachment 2 - Heart and Stroke Loss Ratios.

#### 18. Actuarial Certification

I, Susan Hawthorne, am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I believe this rate filing is in compliance with the applicable laws and rules of this state. This memorandum has been prepared in conformity with all applicable Actuarial Standards of Practice, including ASOP No. 8.

In my opinion, the rates included in the actuarial memorandum are not excessive, inadequate or unfairly discriminatory. They were developed using reasonable assumptions and in accordance with generally accepted actuarial principles. These rates are appropriate for the class of risks for which they are intended. This filing is in compliance with state law and regulation. The actuarial memorandum has been prepared for the sole purpose of demonstrating that the proposed rate schedule is reasonable and the memorandum may be not appropriate for other purposes.

Emerging experience should be carefully monitored relative to the assumptions and appropriate adjustments made to the premiums in a timely manner.

Susan Hawthorne, ASA, MAAA Associate, Society of Actuaries

Member, American Academy of Actuaries

Susan Hawthorne

January 7, 2014

SERFF Tracking	UTAC-129368050	State:	District of
Number:			Columbia
Filing Company:	Loyal American Life Insurance Company	State Tracking	
		Number:	
Company Tracking	LOYAL LSC/LSH		
Number:			
TOI:	H07I Individual Health - Specified Disease	Sub-TOI:	H07I.001 Critical
	- Limited Benefit		Illness
Product Name:	Loyal LSC/LSH		
Project Name:	Loyal LSC/LSH		

Objection Letter Status: Pending Industry Response

Objection Letter Date: 02/11/2014 Respond By Date: 03/04/2014

Submitted Date: 02/11/2014 07:36 AM

Dear Ashley Heath,

Introduction: Thank you for your recent filing. Please see below for additional information requested to

continue review of the rate filing.

# Objection 1

### **Comments:**

The Rate Review Data Detail section of the filing is missing. The State understands this is a new filing and not required, however completing would be preferred. Please correct, via post-submission update.

**RESPONSE:** This is a new filing and not for a rate increase on any non-grandfathered product. We do not have information to provide on this form.

# Objection 2

### **Comments:**

Please provide the SERFF Tracking# for the Companion Forms' Filing(s).

**RESPONSE**: UTAC-129368051

#### Objection 3

- Cover Letter All Filings (Supporting Document)
- Certificate of Authority to File (Supporting Document)
- Actuarial Memorandum (Supporting Document)
- Actuarial Justification (Supporting Document)
- District of Columbia and Countrywide Loss Ratio Analysis (P&C) (Supporting Document)
- District of Columbia and Countrywide Experience for the Last 5 Years (P&C) (Supporting Document)
- Actuarial Memorandum and Certifications (Supporting Document)
- Unified Rate Review Template (Supporting Document)
- Lump Sum Cancer Policy and Recurrence (Rate)
- Lump Sum Heart Policy and Restoration (Rate)
- Hospital and Intensive Care Unit Indemnity Rider (Rate)
- Hospital Indemnity Rider (Rate)
- Intensive Care Unit Rider (Rate)

- Lump Sum Cancer Rider (Rate)
- Lump Sum Heart Rider (Rate)

#### Comments:

The District of Columbia will allow Binding Arbitration only after a dispute arises and both parties are in agreement. Please contact the Forms' Division for acceptable wording.

**RESPONSE:** The arbitration wording used in this policy was given to us by the forms department on 11/29/2013 by Colin Johnson.

### Objection 4

- Actuarial Memorandum (Supporting Document)
- Actuarial Justification (Supporting Document)
- Actuarial Memorandum and Certifications (Supporting Document)
- Lump Sum Cancer Policy and Recurrence (Rate)
- Lump Sum Heart Policy and Restoration (Rate)
- Hospital and Intensive Care Unit Indemnity Rider (Rate)
- Hospital Indemnity Rider (Rate)
- Intensive Care Unit Rider (Rate)
- Lump Sum Cancer Rider (Rate)
- Lump Sum Heart Rider (Rate)

#### **Comments:**

Please provide a detailed make-up of expenses as a percentage of premiums for all ALR. The detailed makeup of expenses should be provided as a percentage of premiums. Each expense item should be accounted for separately and total 100%. Expenses such as taxes, administrative, et al should not be grouped together. Expenses such as profit, claims, commission, e.g. should be included.

**RESPONSE:** I have attached the Detiled Make-up on Expenses Summary under Supporting Documents.

#### Objection 5

- Cover Letter All Filings (Supporting Document)
- Certificate of Authority to File (Supporting Document)
- Actuarial Memorandum (Supporting Document)
- Actuarial Justification (Supporting Document)
- District of Columbia and Countrywide Loss Ratio Analysis (P&C) (Supporting Document)
- District of Columbia and Countrywide Experience for the Last 5 Years (P&C) (Supporting Document)
- Actuarial Memorandum and Certifications (Supporting Document)
- Unified Rate Review Template (Supporting Document)
- Lump Sum Cancer Policy and Recurrence (Rate)
- Lump Sum Heart Policy and Restoration (Rate)
- Hospital and Intensive Care Unit Indemnity Rider (Rate)
- Hospital Indemnity Rider (Rate)
- Intensive Care Unit Rider (Rate)
- Lump Sum Cancer Rider (Rate)
- Lump Sum Heart Rider (Rate)

#### Comments:

Please confirm: Dispositions with respects to this filing are being made on behalf of residents of the District of Columbia only.

**RESPONSE:** We confirm.

#### Objection 6

• Cover Letter All Filings (Supporting Document)

- Certificate of Authority to File (Supporting Document)
- Actuarial Memorandum (Supporting Document)
- Actuarial Justification (Supporting Document)
- District of Columbia and Countrywide Loss Ratio Analysis (P&C) (Supporting Document)
- District of Columbia and Countrywide Experience for the Last 5 Years (P&C) (Supporting Document)
- Actuarial Memorandum and Certifications (Supporting Document)
- Unified Rate Review Template (Supporting Document)
- Lump Sum Cancer Policy and Recurrence (Rate)
- Lump Sum Heart Policy and Restoration (Rate)
- Hospital and Intensive Care Unit Indemnity Rider (Rate)
- Hospital Indemnity Rider (Rate)
- Intensive Care Unit Rider (Rate)
- Lump Sum Cancer Rider (Rate)
- Lump Sum Heart Rider (Rate)

#### Comments:

Please note, this rate filing is subject to conformity with the corresponding forms' filing. This department reserves the right to withdraw the filing if not.

**RESPONSE:** We acknowledge the forms filing must be approved to use this policy.

Component	Overall	Cancer Base	Cancer Rider	Heart Base	Heart Rider	HI Rider	ICU Rider	HICU Rider
Benefits	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%	55.0%
Commissions	30.7%	30.6%	31.0%	30.8%	31.1%	30.4%	30.3%	30.4%
Administrative Expenses	11.4%	12.1%	6.0%	11.8%	5.6%	4.5%	4.5%	4.5%
Premium Tax	2.0%	2.0%	2.0%	2.0%	2.0%	2.5%	2.5%	2.5%
Pre-Tax Profit	6.8%	5.9%	11.4%	7.5%	13.0%	10.4%	9.9%	10.3%
Investment Income	5.9%	5.6%	5.4%	7.1%	6.7%	2.8%	2.2%	2.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%